

IN THE ABSTRACT:

~~An object of the present invention is to highly precisely correct data in terms of the beam-hardening effect in relation to each channel even when the data is acquired by scanning a relatively large subject. The present invention~~ An X-ray computed tomographic (CT) system includes: a beam-hardening correction block that corrects first projection information in terms of the beam-hardening effect so as to produce second projection information; a first fitting block that fits a first function to the second projection information so as to produce third projection information; a second fitting block that fits a second function to the third projection information values that are provided as functions having as independent variables the second projection information values sampled in relation to all the views and each of the channels of an X-ray detector; and a correction coefficient modification block that modifies a second correction coefficient, which is calculated using a second phantom larger in dimensions than a first phantom, using a first correction coefficient calculated using the first phantom.